Ambient Weather WR-099 Emergency Solar Hand Crank Radio, Flashlight with AM/FM/NOAA Weather Band and Smart Phone Charger User Manual

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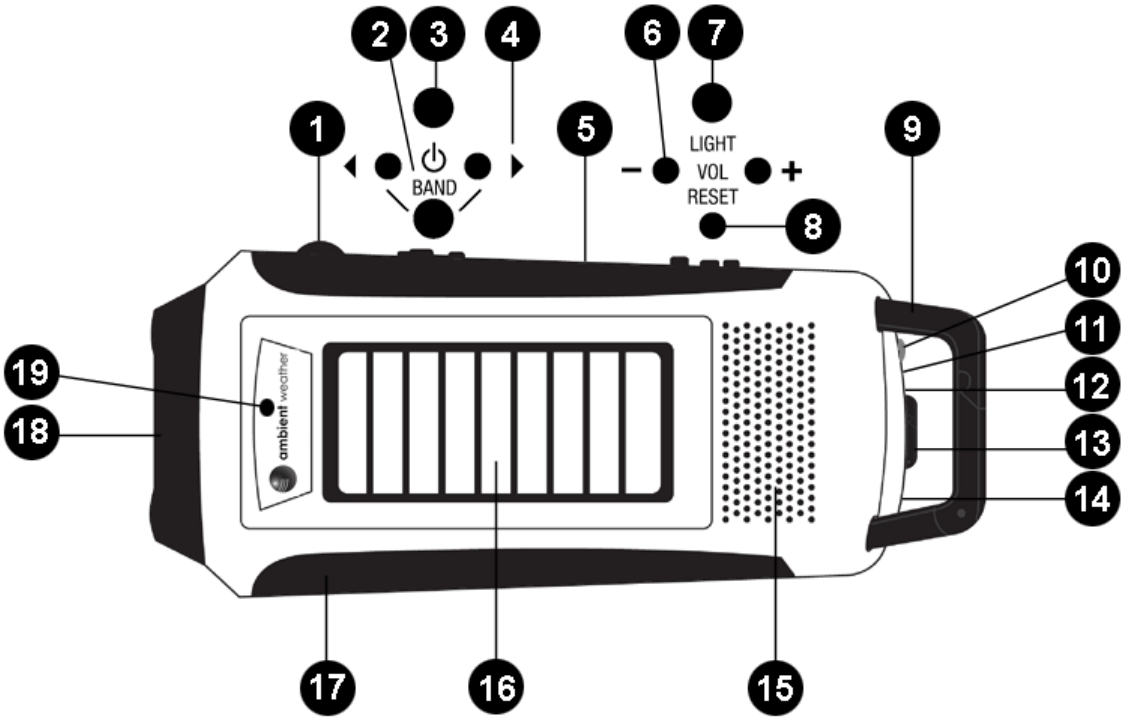
1. Introduction

Thank you for your purchase of the Ambient Weather WR-099 Emergency Solar Hand Crank Radio, Flashlight with AM/FM/NOAA Weather Band and Smart Phone / Portable Device Charger. To download the latest full size manual (for easy viewing) and additional troubleshooting tips, please visit:

http://ambientweather.wikispaces.com/wr099

2. Controls



No	Description	No	Description
1	Flashlight switch	11	Headphone Jack
2	Radio BAND (AM/FM/WB)	12	Power Input Port (to computer or optional AC adaptor)
3	Power On/Off (⏻)	13	Hand Crank
4	Radio Tune Up (▶) Tune Down (◀)	14	Power Output Port (to smart phone or PDA)
5	LCD Display	15	Speaker
6	Volume Up (+) Volume Down (-)	16	Solar Panel
7	Backlight (LIGHT)	17	Rechargeable battery compartment
8	RESET	18	LED Flashlight
9	Carabiner Clip	19	Charge Indicator Light
10	Retractable Antenna (FM)		

Figure 1

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3. Cables and Adaptors

The WR-099 includes the following cables and connectors:

1. **2.5 Stereo Cable**. Connects Power Out Jack to smart phone tips (3), (4) and (5).
2. **Power In Cable**. Connects Power In Jack to USB power (from a compute or optional AC or DC converter).
3. **Female USB Tip**. Connects 2.5 Stereo Cable (1) to USB smart phone or PDA. Most smart phones include USB cables (example, IPhones).
4. **Mini USB Tip**. Connects 2.5 Stereo Cable (1) to mini USB smart phone or PDA.
5. **Micro USB Tip**. Connects 2.5 Stereo Cable (1) to micro USB smart phone or PDA.

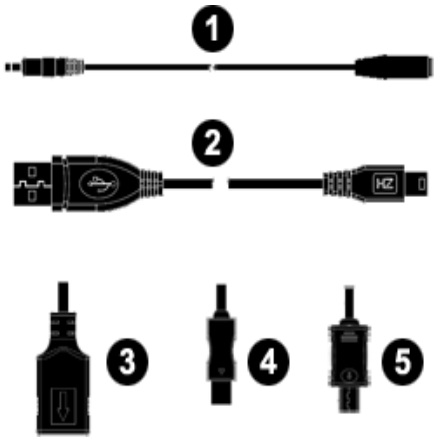

Figure 2

4. Warnings

⚠ Hand Crank Warning

To prevent overheating of the dynamo hand crank and permanent damage, do not crank faster than approximately two revolutions per second. Do not crank continuously for more than two minutes. After two minutes, allow two minutes of rest before cranking again.

⚠ Smart Phone Charging Feature

The smart phone charging feature is intended to make brief calls. It is not intended to serve as a normal smart phone charging device, due to the limited battery capacity.

Before using this product, please read the following warning and cautions:

1. Read these instructions – All the safety and operating instructions should be read before the unit is operated.
2. Keep these instructions – The safety and operating instructions should be kept for future reference.
3. Heed all warnings – All warnings on the device and in the operating instructions should be adhered to.
4. Follow all instructions – All operation and use instructions should be followed
5. Do not use this item near water – The device should not be used near water; for example, near a bath tub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool. Unplug immediately if liquid has been spilled or any object has fallen into the unit.
6. Clean only with dry cloth – The device should be cleaned only as recommended by the manufacturer.
7. Do not install near any heat sources such as radiators, heat registers, stoves, or other device (including amplifiers) that produce heat.
8. Do not place near a fire. The battery can explode.
9. Only use attachments / accessories recommended by the manufacturer.

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10. Power Sources – The device should be connected to a power supply only of the type described in the operating instructions or as marked on the device. Do not overload wall outlet.
11. Do not attempt to dismantle, open or repair this product yourself. If a fault occurs, seek advice from Ambient Weather support only.
12. Only operate within specified temperature range (32 °F to 131 °F).
13. Do not burn or bury batteries. Do not puncture or crush. Do not disassemble. Recycle batteries. Do not dispose of in the trash.
14. If the electrolyte in the cells should get on your skin, thoroughly wash with soap and water. If in the eyes, rinse thoroughly with cool water. Immediately seek medical attention.
15. Charge batteries on a fireproof surface away from flammable items or liquids.

5. Features

The WR-099 includes the following features:

- Super bright 3-LED flashlight
- AM/FM with Weather Band Feature
- Emergency smart phone / PDA charger
- Backlight digital display
- Audio output (headphones)

6. Power Sources

The WR-099 can be powered from the following sources:

- DC power from a USB power source, such as a computer
- AC power by adding a USB to AC adaptor (optional)
- DC car charger by adding a USB to DC car adaptor (optional)
- Solar power
- Hand crank power

6.1 DC and AC Power

Prior to using the WR-099, we recommend you charge the rechargeable battery through the Power Input Port (Figure 3) using a computer USB port or optional AC adaptor. The WR-099 takes about two hours to fully charge from a drained battery.

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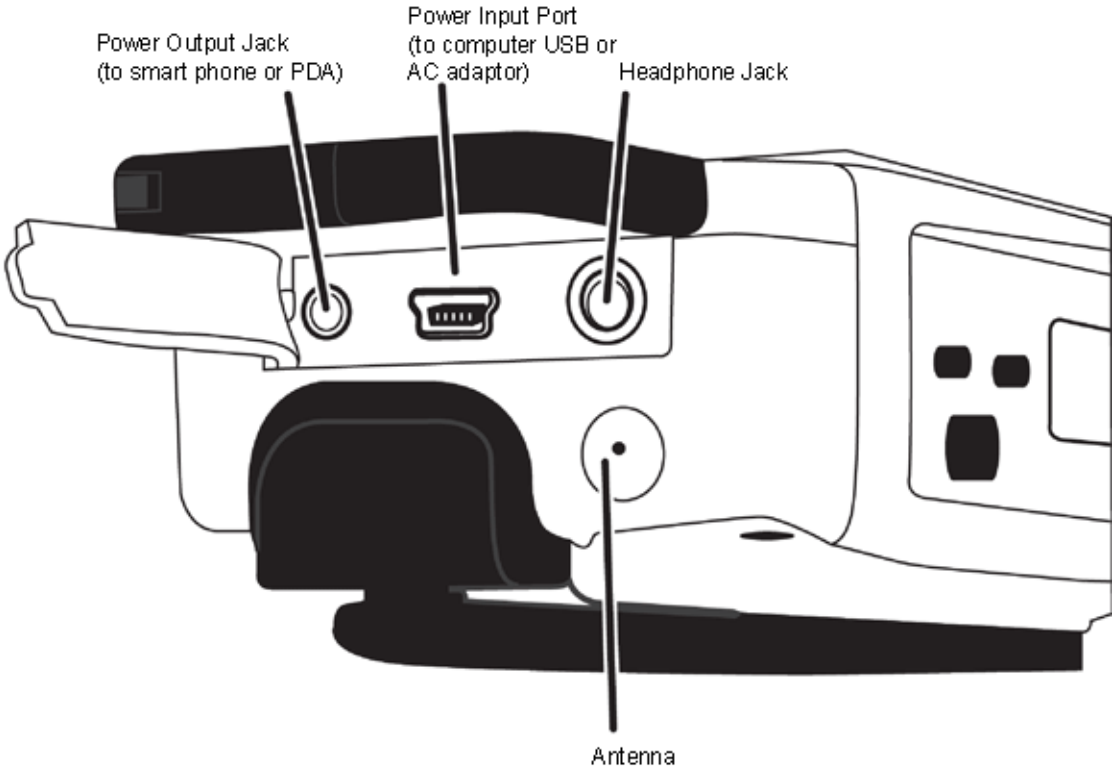

Figure 3

Lift the rubber tab on the back of the WR-099 to expose the power port.

Connect the DC power input cable (**Figure 2**) to the USB mini jack, and the other end to the USB power source. The red battery charge indicator light will illuminate when charging (**Figure 1**). Continue to charge the WR-099 for about two hours. The WR-099 is now ready for use.

NOTE: Use 5.0V USB power source (from a computer or appropriate AC or DC adaptor). Over-voltage may result in damaging the WR-099.

6.2 Solar Power

Place the WR-099 in direct (or indirect) sunlight with the solar panel facing upwards (Figure 1). The red battery charging light will illuminate when charging.

NOTE: If the display heats up outside the operational range, the display will fade.

6.3 Hand Crank Power

To operate the hand crank, perform the following:

1. Lift the hand crank from the cradle, as shown in Figure 3.
2. Turn the hand crank either clockwise or counterclockwise at about two cranks per second for two minutes to activate the internal battery for initial use, or when the unit has not been used for more than 60 days. The red battery charging light illuminates when charging, as shown in Figure 1.
3. One minute of cranking will provide about 30 minutes of flashlight use, and about 20 minutes

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of radio power (depending on the volume)*.

*Power times specified are for an active unit with at least a partial charge. Some additional cranking time will be needed for a stored unit (i.e. 60 days) with no battery charge.

⚠ Hand Crank Warning

To prevent overheating of the dynamo hand crank and permanent damage, do not crank faster than approximately two revolutions per second. Do not crank continuously for more than two minutes. After two minutes, allow two minutes of rest before cranking again.

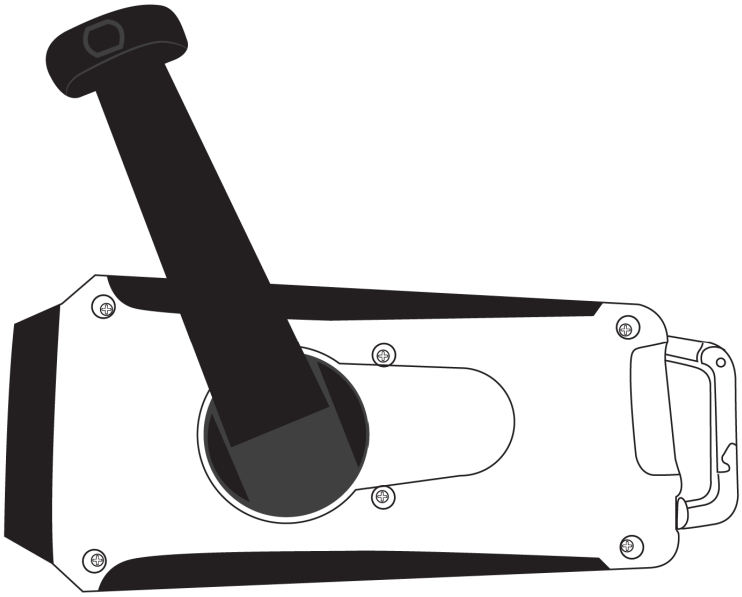

Figure 4

7. Operation

7.1 Flashlight Operation

Turn the light on and off with the light switch on the top of the unit (Figure 1).

7.2 Radio Operation

The WR-099 includes a digital LCD display with backlighting, with the following push button controls:

- **POWER** ⏻. Turns on and off the radio. Transitions from clock display to radio tuner display.
- **MODE**. Switches the radio band between AM, FM, SW, weather band (WB0, and weather band alert mode ALT)..
- ▶ **:** Adjusts the radio frequency up
- ◀ **:** Adjusts the radio frequency down
- **VOL+:** Adjusts the radio volume up
- **VOL-:** Adjusts the radio volume down
  LIGHT: The backlight will turn on for 10 seconds.

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7.3 Radio Band Mode

NOTE: Radio reception is dramatically reduced when charging from USB. Disconnect USB power when listening to the radio.

Press the **POWER** ⏻ button to turn the radio on the radio.

The radio will default to **FM** band (or the last radio band since power up). Press the **MODE** button to change to the **AM** band. Press the **MODE** button to change to the Weather Band (**WB**).

NOTE: Radio interference will be present while charging the WR-099. For best reception, there is a telescoping antenna. Extend the antenna and change the position if the reception is weak.

7.3.1 AM/FM Radio Tuning

When the radio is turned on, press the ▶ button to increase the frequency and press the ◀ button to decrease the frequency.

To auto scan, press and hold the (▶ or ◀) key for at least one second and the radio will automatically tune to next radio station with sufficient reception.

7.3.2 Weather Band Tuning

There are seven distinct weather channels. The frequencies are 162.400 MHz, 162.425 MHz, 162.450 MHz, 162.475 MHz, 162.500 MHz, 162.525 MHz and 162.550 MHz.

For a complete list of weather radio broadcasting stations, please visit the National Weather Service website:

www.nws.noaa.gov/nwr/indexnw.htm

Our recommendation is to tune to the station with the best reception using the ▶ button. You will hear the "voice of the National Weather Service", and automated voice that provides forecast information, weather statements, watches and warnings.

7.4 Smart phone and PDA Operation

Because smart phone batteries vary in their current ratings, we cannot specify charging rates or usage time. 10 to 15 minutes of cranking may result in 1 or more minute of talk-time, but your results may vary.

NOTE: Charging a smart phone through the Phone Charger Jack is intended for emergency purpose only. It is not intended for recharging fully a discharged smart phone battery. Smart phone battery capacity significantly exceeds the battery capacity of the WR-099. Therefore, a fully charged WR-099 will only partially charge a smart phone or PDA. After the battery stops charging the device, begin cranking if a DC power source is not available to continue recharging the smart phone.

NOTE: The WR-099 may not support charging of Apple products, including but not limited to the IPad and IPhone due to current output limitations.

To charge the smart phone or PDA:

1. Lift the rubber tab on the back of the WR-099 to expose the connectors, as shown in Figure 3.

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2. Plug the smart phone charging cable (Figure 2, reference 1) into the WR-099 power output port.
   Connect the appropriate smart phone tip (Figure 2, reference 2,3,4) into the other end of the smart phone charging cable (Figure 2). Plug other end of the smart phone tip (Figure 2, reference 2,3,4) into the smart phone's charging connector.
3. If the phone does not begin charging, begin cranking. When charging a smart phone via the smart phone charger, it is important to turn the crank at least two revolutions per second, or until you see red charging LED turn on. This is an indication that the phone is receiving enough power from the WR-099. Continue to crank at this rate until you are satisfied that an appropriate level of charge has been received by your smart phone.

NOTE: You may receive a charging compatibility error on your smart phone, but your device may still charge and it will not harm your device.

7.5 Audio Output / Head Phones

The WR-099 includes an audio output jack. This allows you to listen with headphones or connect to an auxiliary input source, such as an amplifier.

CAUTION: Guard your ears against hearing damage. When listening with headphones, start at the lowest volume and gradually increase until you can hear it comfortably and clearly.

Read this Important Information before Using Your Earbuds:

- Avoid extended play at very high volume as it may impair your hearing.
- If you experience ringing in your ears, reduce the volume or shut off the unit.
- Keep the volume at a reasonable level even if your headset is an open-air type designed to allow you to hear outside sounds. Please note that
- Excessively high volume may still block outside sounds.

7.6 Resetting the Unit

A protection circuit may engage if the WR-099 has an over current condition. Press the RESET button (near the radio volume controls) to reset the protection circuit any time the unit appears dead. Pressing reset will likely return the unit to normal operation.

8. Care and Maintenance

8.1 Battery Maintenance

To maintain the battery and extend battery life, periodically charge through the USB power port every few weeks. You can leave it plugged in all of the time and not damage the WR-099.

8.2 General Care and Maintenance

- Do not tamper with the internal components of the unit.
- Clean your unit with a damp (never wet) cloth. Solvent or detergent should never be used.
- Avoid leaving your unit in direct sunlight or in hot, humid or dusty places.
- Keep your unit away from heating appliances and sources of electrical noise such as fluorescent lamps or motors

CAUTION: Never allow any water to enter the unit while cleaning.

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9. Specifications

Dimensions: 128 x 80 x 45mm (5.04 x 3.15 x 1.77 in.)
Weight: Approximately 200g (.44 lbs)
Power Consumption (max): 1W
Radio Frequency Range: 520-1710 KHz AM; 87-108 MHz FM
WB (MHz): 1)162.400 2)162.425 3)162.450 4)162.475 5)162.500 6)162.525 7)162.550
Internal Battery: AAA 800MAh 3.5 V Ni-MH
Battery Life: Greater than 3 years and more than 500 charging cycles with 3 hours of daily use.

10. Troubleshooting Guide

If your question is not answered here, you can contact us as follows:

1. Email Support: support@ambientweather.com
2. Live Chat Support: www.ambientweather.com/chat.html (M-F 8am to 4pm Arizona Time)
3. Technical Support: 480-283-1644 (M-F 8am to 4pm Arizona Time)

Problem	Solution
The unit will not power up.	Fully charge the WR-099 through the USB power port.
Phone generates an error message when plugged into the WR-099.	A lower voltage output may result in error messages on the phone but should still charge the phone.
The Weather Band reception is poor.	• Weather band reception can be poor inside a metal building, structure or where electronic noise is present. Try moving outside to improve reception • Check local reception by driving to a different location and testing the weather band reception. • Radio reception is dramatically reduced when charging from USB. Disconnect USB power when listening to the radio.
My smart phone connector is not supported. Where can I purchase the proper tip for my smart phone?	Contact Ambient Weather with your smart phone model and connector type. The connectors included cover about 95% of the smart phone market. A female USB tip is included, and most smart phones include USB cables.
The WR-099 will not fully charge my smart phone.	Charging a smart phone through the Phone Charger Jack is intended for emergency purpose only. It is not intended for recharging fully a discharged battery. Smart phone battery capacity significantly exceeds the battery capacity of the WR-099. Therefore, a fully charged WR-099 will only partially charge a smart phone or PDA device. After the battery stops charging the device, disconnect the device and begin cranking if a DC power source is not available.
The display fades when placed in direct sunlight.	If the display heats up outside the operational range, the display will fade. For solar charging, partial sunlight or shade is sufficient.

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11.Accessories

The following software and hardware accessories are available for the WR-099 at www.AmbientWeather.com .

Accessory	Image	Description
Ambient Weather WR-AC1 UL Rated USB to AC Adaptor for Small Electronics Devices		AC adaptor connects to USB Power Port
Ambient Weather WR-DC1 USB to DC Converter for Small Electronic Devices		DC converter connects to USB Power Port
Ambient Weather WR-005 10 in 1 Phone USB Charger		Connectors for: Nokia 3.5mm Samsung PSP, PSP 2000, PSP 3000 Nokia 2mm Motorola LG Motorola Samsung Sony Ericsson Apple

12.Liability Disclaimer

- Please help in the preservation of the environment and return used batteries to an authorized depot.
- The electrical and electronic wastes contain hazardous substances. Disposal of electronic waste in wild country and/or in unauthorized grounds strongly damages the environment.
- Reading the "User manual" is highly recommended.
- The specifications of this product may change without prior notice.
- This product is not a toy. Keep out of the reach of children.
- No part of this manual may be reproduced without written authorization of the manufacturer. Ambient, LLC WILL NOT ASSUME LIABILITY FOR INCIDENTAL, CONSEQUENTIAL, PUNITIVE, OR OTHER SIMILAR DAMAGES ASSOCIATED WITH THE OPERATION OR MALFUNCTION OF THIS PRODUCT.

13. Warranty Information

Ambient, LLC provides a 1-year limited warranty on this product against manufacturing defects in materials and workmanship.

This limited warranty begins on the original date of purchase, is valid only on products purchased and only to the original purchaser of this product. To receive warranty service, the purchaser must contact Ambient, LLC for problem determination and service procedures.

Warranty service can only be performed by Ambient, LLC. The original dated bill of sale must be presented upon request as proof of purchase to Ambient, LLC.

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Your Ambient, LLC warranty covers all defects in material and workmanship with the following specified exceptions: (1) damage caused by accident, unreasonable use or neglect (lack of reasonable and necessary maintenance); (2) damage resulting from failure to follow instructions contained in your owner's manual; (3) damage resulting from the performance of repairs or alterations by someone other than an authorized Ambient, LLC authorized service center; (4) applications and uses that this product was not intended (5) the products inability to receive a radio signal due to any source of interference, metal obstructions or other reception issues.

This warranty covers only actual defects within the product itself, and does not cover the cost of installation or removal from a fixed installation, normal set-up or adjustments, claims based on misrepresentation by the seller or performance variations resulting from installation-related circumstances.

14. FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

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15. Battery Recycle Statement

Recycle Rechargeable Batteries

Recycle your old rechargeable batteries at one of the many collection sites in the U.S. and Canada. To find the site nearest you, visit www.call2recycle.org or call toll-free 1-877-2-RECYCLE.

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